



Making Impact

Annual Report 2014-2015

Compete.



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From Our Leaders

The first thing we hope you will notice about the Council on Competitiveness 2014-2015 Annual Report, ***Making Impact***, is the cover featuring the lobby of the Council's innovative new office space. Highlighting American-made products from iconic companies such as Mohawk and Steelcase, our new home embodies the creativity and collaboration that are hallmarks of the Council's work. If you have not visited us yet, please plan on coming by soon.

We are pleased to share with you in the following pages important accomplishments and events from the past year and exciting previews of the year ahead. As always, we are grateful to our members for their leadership, time and unquestioned commitment to the Council's mission to enhance U.S. productivity, raise the standard of living for all Americans and create opportunity globally for American products and ideas.

This mission was never more evident than at the **2014 National Competitiveness Forum** featuring top speakers, lively discussions and the annual release of the ***Clarion Call for Competitiveness***. New in 2014, the Council issued a report card for policymakers on a set of key issues affecting the economy. We will be updating both the *Clarion Call* and the policymakers' grades in 2015.

As you know, last year marked the ten-year anniversary of the Council's landmark **National Innovation Initiative**. Building on that legacy, we could not be more pleased to announce a groundbreaking new effort supported by the National Science Foundation, the **Exploring Innovation Frontiers Initiative**, to catalyze a transformative innovation agenda for the country.

The Council's overall innovation portfolio continues to break new ground and drive policy throughout the public and private sectors. Entering its seventh year, the **Technology Leadership & Strategy Initiative (TLSI)** maintained its strong engagement among Council members while continuing to add new insights and recommendations to the

technology policy agenda. The **High Performance Computing Advisory Committee**, a vital complement to the TLSI, led the way towards an exascale economy with new research and a strong commitment from the Department of Energy's office of Science to continue their long standing partnership with the Council.

Similarly, the **National Engineering Forum**—a partnership between the Council and Lockheed Martin—continued to spearhead an engineering movement across the country through a series of critical dialogues, building enthusiasm and momentum toward a national cornerstone event in 2017.

Ten years ago, when the Council's NII Report, ***Innovate America***, called out **energy and manufacturing** as the two critical economic pillars requiring greater focus by policymakers, no one could have predicted the renaissance in U.S. manufacturing or the country's transition from energy scarcity to energy abundance we've seen in the past few years. Recognizing the need to understand better and capture this tremendous opportunity to leverage U.S. capabilities, the Council formally launched the **Energy & Manufacturing Competitiveness Partnership (EMCP)** with a C-Suite Steering Committee meeting earlier this year.

The EMCP builds upon the tremendous foundational work done over the previous two years in the **American Energy & Manufacturing Competitiveness (AEMC) Partnership**, the ongoing collaboration with the Department of Energy's Office of Energy Efficiency and Renewable Energy. This vital partnership is expanding in 2015 with a new set of Dialogues with the Department of Energy's Office of Fossil Energy and Nuclear Energy, and the launch of the **Accelerate Energy Productivity 2030** initiative with the Honorable Ernest J. Moniz, Secretary, U.S. Department of Energy, to develop a plan to double energy productivity by 2030. The **3rd AEMC Summit** will take place later this year in Washington, D.C.



Samuel R. Allen

Chairman, Council on Competitiveness
Chairman and CEO, Deere & Company



Deborah L. Wince-Smith

President & CEO
Council on Competitiveness

Importantly, the Council continued to expand and deepen our global engagements recognizing that competitiveness knows no boundaries. Preparation is underway for the **4th U.S.-Brazil Innovation Summit** in San Diego, CA in October, and the **U.S.-Brazil Bi-National Innovation Platform**, started last year, is already catalyzing significant partnerships between the two nations. The Council's leadership as a founding member of the **Global Federation of Competitiveness Councils (GFCC)** was highlighted by a senior delegation attending the GFCC annual meeting in Banff, Canada last fall

and our continuing work to help develop the **Competitiveness Decoder™**—the first big data analytics tool to help measure and benchmark a nation's competitiveness.

As you can see, the Council remains at the forefront driving the nation's competitiveness agenda. We look forward to engaging you all in an exciting and productive year ahead.

National Competitiveness Forum

The Council on Competitiveness hosted its third annual National Competitiveness Forum (NCF) at the Newseum in Washington, D.C. September 15-16, 2014.

The 2014 NCF was a commanding platform for Council members and other thought leaders to engage in conversation, elaborate on ideas and set the competitiveness action agenda for the nation. They analyzed and addressed America's competitiveness capacity and at the end of the day coalesced around a strong and impactful voice of influence.

The NCF featured dynamic and interactive discussions with senior leadership from industry, government, labor, academia and the national laboratories addressing the current state of U.S. competitiveness and exploring pressing and emerging priorities at the heart of America's economic ecosystem. This cadre of senior leaders included Mr. James K. Clifton, Chairman and CEO, Gallup, Inc.; Ms. Adena Friedman, President, The NASDAQ OMX Group, Inc.; the Honorable France A. Córdova, Director, National Science Foundation; Dr. Pradeep K. Khosla, Chancellor, University of California, San Diego; Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness; the Honorable Catherine A. Novelli, Under Secretary for Economic Growth, Energy, and the Environment, U.S. Department of State; and, Mr. Jeffrey Wilcox, Vice President of Engineering, Lockheed Martin.

The NCF also brought together panels on the future of U.S. learning and workforce skills, strategies and policies for accelerating technology development and transfer, the nexus of energy and manufacturing, and more.



The NCF kicked off on September 15 with dinner at the Corcoran Gallery of Art honoring the Council's Chairman, Mr. Samuel R. Allen, President and CEO of Deere & Company, for his distinguished career and leadership on competitiveness issues.

The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Mr. Mario Longhi, President and CEO, United States Steel Corporation; Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; and Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin.

“There’s no doubt that this energy boom has paid a big dividend and could pay an even bigger dividend if we were to get real solid policies in place and allow the long-term competitiveness to continue to increase.”

Mr. Samuel R. Allen

Chairman and CEO, Deere & Company
Chairman, Council on Competitiveness



Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness; Mr. Charles O. Holliday, Jr., Former Chairman, Bank of America, and Chairman Emeritus, Council on Competitiveness; and Mr. William P. Hite, General President, United Association of Plumbers and Pipefitters, and Labor Vice Chairman, Council on Competitiveness.

Top: Dr. Elizabeth Stroble, President, Webster University; Dr. Luis M. Proenza, President Emeritus, The University of Akron, and Distinguished Fellow, Council on Competitiveness; and Dr. Llyod A. Jacobs, President Emeritus, The University of Toledo, and Distinguished Fellow, Council on Competitiveness.

Center: Dr. Alan Snyder, Vice President and Associate Provost for Research and Graduate Studies, Lehigh University; and Mr. William C. Bates, Executive Vice President and Chief of Staff, Council on Competitiveness.

Bottom: The Honorable Sandy Baruah, President and CEO, Detroit Regional Chamber; Mr. James M. Phillips, Chairman and CEO, NanoMech, Inc.; Mr. James K. Clifton, Chairman and CEO, Gallup, Inc.; and Mr. Geoffrey Brewer, Editorial Director, Gallup Press.



“You have to get it across to these young men and women that working with your hands is a viable choice to go out and get the American Dream.”

Mr. William P. Hite

General President, United Association of Plumbers and Pipefitters
Labor Vice Chairman, Council on Competitiveness



Top: Dr. J. B. Penn, Chief Economist, Deere & Company; Ms. Aliya Ibragimova, Project Manager, Deere & Company; Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; Mr. Mark Hiew, Project Manager, Deere & Company; Mrs. Marsha Allen; and Mr. Charles R. Stamp, Vice President, Public Affairs Worldwide, Deere & Company.

Center: Dr. James P. Clements, President, Clemson University, Mr. Richard V. French, Director of External and Federal Relations, West Virginia University; and Mr. Chris Mustain, Vice President, Council on Competitiveness.

Bottom: Mr. Charles O. Holliday, Jr., Former Chairman, Bank of America, and Chairman Emeritus, Council on Competitiveness.

Center: Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Mrs. Marsha Allen; H.E. Mauro Viera, Minister of State for Foreign Affairs, the Government of the Federative Republic of Brazil; Mr. William P. Hite, General President, United Association of Plumbers and Pipefitters, and Labor Vice Chairman, Council on Competitiveness; and Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness.

Bottom: Dr. Patrick V. Farrell, Provost and Vice President for Academic Affairs, Lehigh University; and Dr. Steven F. Ashby, Director, Pacific Northwest National Laboratory.

“Our ability to retain them [new workers], our ability to bring stability to their research environment is increasingly under stress.”

Dr. Paul J. Hommert

Director, Sandia National Laboratories
 President, Sandia Corporation



Center: Dr. Pradeep K. Khosla, Chancellor, University of California, San Diego; the Honorable France A. Córdova, Director, National Science Foundation; and Dr. Paul J. Hommert, Director, Sandia National Laboratories, and President, Sandia Corporation.

Bottom: Mr. Charles R. Stamp, Vice President, Public Affairs Worldwide, Deere & Company; Mr. David L. Britten, Senior Vice President and Chief Technology Officer, United States Steel Corporation; Mr. Mario Longhi, President and CEO, United States Steel Corporation; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; and Dr. Klaus G. Hoehn, Vice President, Advanced Technology and Engineering, Deere & Company.

Top: The Honorable France A. Córdova, Director, National Science Foundation; Mr. A. Scott Sudduth, Director, Federal Relations, Texas A&M University; and Dr. Dimitris Lagoudas, Senior Associate, Dean for Research, Texas A&M University.

Center: Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin.

Bottom: Dr. Salim Shah, Chief Scientist, Georgetown University; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Ms. Cândida Oliveira, Senior Advisor to the President, The Brazilian Agency for Industrial Development-ABDI; and Dr. Roberto dos Reis Alvarez, Executive Director, Global Federation of Competitiveness Councils.



Top: Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; and Mrs. Marsha Allen.

Bottom: Dr. Pradeep K. Khosla, Chancellor, University of California, San Diego; Dr. Mohammad A. Zaidi, Former Chief Technology Officer, Alcoa Inc., and Distinguished Fellow, Council on Competitiveness; and Mr. William Bohnett, President, Whitecap Investments LLC.

Since 2012, the Council has issued a clear and concise competitiveness agenda for policymakers at the NCF—a roadmap to follow based on more than two decades of research and the insights of the nation’s leading corporate executives, academic and labor leaders and national lab directors. The **2014 Clarion Call** highlights key emerging trends and ongoing U.S. competitiveness challenges and, for the first time, offers letter grades on policymakers’ progress (or lack thereof) on its core recommendations.

CLARION CALL FOR COMPETITIVENESS
EMERGING TRENDS AND ONGOING CHALLENGES

WHY THE CLARION CALL
Since 2012, the Clarion Call has laid out a competitiveness agenda for policymakers, a roadmap to follow based on more than two decades of research and the insights of the nation’s leading corporate executives, academic and labor leaders, and national lab directors. The Clarion Call highlights key emerging trends and ongoing U.S. competitiveness challenges. And for the first time, the Council offers letter grades on policymakers’ progress (or lack thereof) on core recommendations.

CALL TO ACTION
GRADE

VALUES
Create a green card for the diploma: issue of high skilled immigrants who acquire an advanced degree in the United States.

TECHNOLOGY
Implement a national network of advanced manufacturing clusters and green factory ecosystems.

RESEARCH
Double the investment in federal research and development.

INFRASTRUCTURE
Deploy and update a modern and resilient infrastructure across the United States.

EDUCATION
Education and skills are essential. The U.S. median wage for a worker with less than a high school diploma is only \$20,110 A YEAR, less than half the median wage paid a college degree holder.

ENERGY
The U.S. trade deficit increased by \$61 BILLION between 2010 and 2013, thanks to improved energy independence and exports in services and agriculture. America still has the world’s largest economy. However, ENERGY RESERVE REMAINS

EMPLOYMENT
Employment has rebounded to pre-recession levels. Despite a dip in August job creation in the final half of 2013 it was the strongest in over 15 years. Over the last year, THE UNEMPLOYMENT RATE DROPPED FROM 7.2 TO 6.1% OF THE LABOR FORCE. Fully recovered from its pre-recession levels and is continuing along an upward trend. The U.S. economy has added >600,000 JOBS since 2010.

GDP
Over the past three years, average annual growth has **GROWN AT ONLY 0.7%**. Compare to the 2% growth rate of the 1990s and the 3.5% rate of the 2000s.

INVESTMENT
The federal government’s investment in **BASIC RESEARCH WAS 0.78% OF GDP IN 2013. THIS IS A 25% DECLINE SINCE 2003** and is affecting the foundation for big breakthroughs.

RESEARCH & DEVELOPMENT
The U.S. trade deficit increased by \$61 BILLION between 2010 and 2013, thanks to improved energy independence and exports in services and agriculture. America still has the world’s largest economy. However, ENERGY RESERVE REMAINS

2014 Clarion Call

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2. The Wall Street Journal, “U.S. Economy Shows Signs of Recovery,” July 16, 2014
3. Bureau of Labor Statistics, United States Department of Labor
4. Bureau of Economic Analysis, United States Department of Commerce
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99. Bureau of Labor Statistics, United States Department of Labor, Monthly Labor Review, April 2014
100. Bureau of Economic Analysis, United States Department of Commerce, Department of Commerce

“There is no return on investment unless there’s investment.”

The Honorable France A. Córdoba
 Director, National Science Foundation



Top: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; the Honorable France A. Córdoba, Director, National Science Foundation; Dr. Dimitri F. Kusnezov, Director, Office of Research and Development for National Security Science & Technology, National Nuclear Security Administration.

Bottom: Mr. Bradley D. Wine, Partner, Morrison Foerster LLP; and Mr. Dominik Knoll, Chief Executive Officer, World Trade Center of New Orleans.

The Council on Competitiveness would like to thank the following lead sponsors of the 2014 National Competitiveness Forum

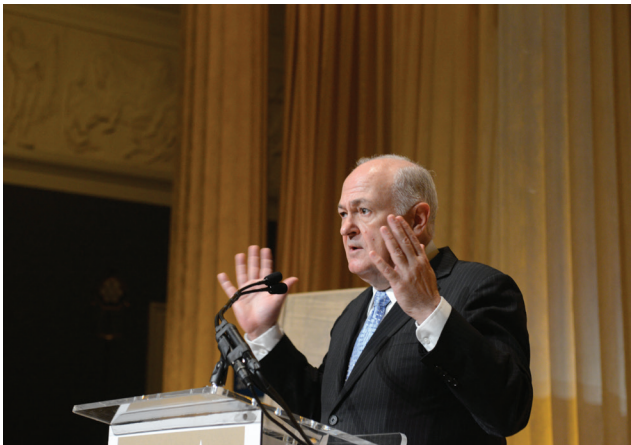
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 The University of Akron
 The University of Chicago



Top left: Dr. W. Randolph Woodson, Chancellor, North Carolina State University; Dr. Lou Anna K. Simon, President, Michigan State University; and Dr. Pradeep K. Khosla, Chancellor, University of California, San Diego.

Top right: Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness.

Bottom left: Dr. Steven Knapp, President, The George Washington University.

Bottom right: The Honorable Bart J. Gordon, Partner, K&L Gates, LLP, and Distinguished Fellow, Council on Competitiveness; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; H.E. Mauro Viera, Minister of State for Foreign Affairs, the Government of the Federative Republic of Brazil.

Center: Mr. Jason Moore, Lockheed Martin, Technical Assistant to the CTO; Dr. Robie Samanta-Roy, Vice President, Technology and Innovation, Lockheed Martin; Mr. Troy Scully, Communications Director, Lockheed Martin; Mr. Chad Evans, Executive Vice President, Council on Competitiveness; Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Ms. Meagan Campion, External Engineering Advocacy, Lockheed Martin; Dr. Klaus G. Hoehn, Vice President of Advanced Technology and Engineering, Deere & Company; Mr. Sam Yakulis, Director, Engineering Excellence, Lockheed Martin; Dr. Dana (Keoki) Jackson, Vice President and Chief Technology Officer, Lockheed Martin; Ms. Kristen Bloschok, Strategic Manufacturing Thread Lead, Advanced Materials, Lockheed Martin; and Mr. Grant Bischof, Senior Research Engineer, NEXT Team, Lockheed Martin.

SAVE THE DATE
2015 National Competitiveness Forum
 December 3-4
 Washington, D.C.

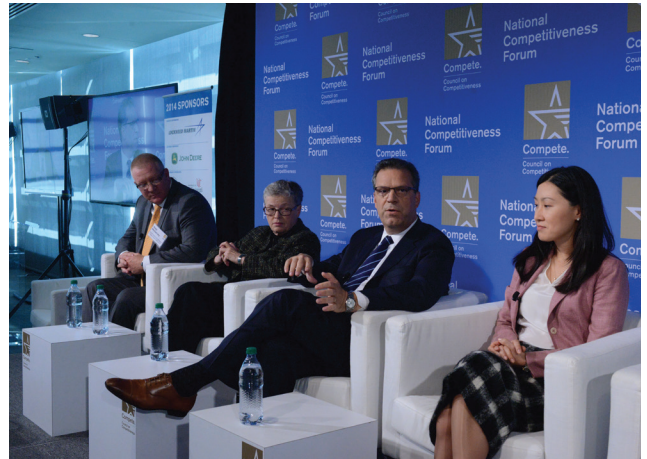


Center: Mr. Mario Longhi, President and CEO, United States Steel Corporation; Dr. W. Randolph Woodson, Chancellor, North Carolina State University; Dr. Santa J. Ono, President, University of Cincinnati; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Dr. Kenan Sahin, Founder and President, TIAX LLC; Mr. William P. Hite, General President, United Association of Plumbers and Pipefitters, and Labor Vice Chairman, Council on Competitiveness; Mr. William Bohnett, President, Whitecap Investments LLC; Mr. James M. Phillips, Chairman and CEO, NanoMech, Inc.; Mr. Paul A. Yarossi, President, HNTB Holdings Ltd; and Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness.

Top: Dr. Santa J. Ono, President, University of Cincinnati; and Mr. Paul Scialla, Founder, CEO, Delos Living, LLC.

Bottom left: The Honorable Catherine A. Novelli, Under Secretary for Economic Growth, Energy, and the Environment, U.S. Department of State.

Bottom right: Dr. Roberto dos Reis Alvarez, Executive Director, Global Federation of Competitiveness Councils; and Mr. Chad Evans, Executive Vice President, Council on Competitiveness present the Competitiveness Decoder™.



Top: Ms. Adena T. Friedman, President, The NASDAQ OMX Group, Inc.

Center: Dr. Santa J. Ono, President, University of Cincinnati; and Dr. G.P. "Bud" Peterson, President, Georgia Institute of Technology.

Bottom: Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; Mr. James K. Clifton, Chairman and CEO, Gallup, Inc.; and Mr. William P. Hite, General President, United Association of Plumbers and Pipefitters, and Labor Vice Chairman, Council on Competitiveness.

Top: Mr. Sean McGarvey, President, North America's Building Trades Unions; Dr. Lou Anna K. Simon, President, Michigan State University; Mr. Jeffrey J. Wilcox, Vice President of Engineering, Lockheed Martin; and Ms. Simin Zhou, Vice President, Digital Manufacturing Technologies, Underwriters Laboratories, Inc.

Center: Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness; and Mr. Jose Ferreira, Founder and CEO, Knewton, Inc.

Bottom: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; and Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness.

COMPETE: POLICY IMPACT

The Council on Capitol Hill

The American entrepreneurial spirit has long been the engine of our national economic growth and competitiveness. While this spirit remains as robust and resolute as ever, the American competitive ecosystem—along with the tools American innovators and entrepreneurs need to compete on the global stage—has increasingly fallen behind international competitors.

As detailed in the Council's *Clarion Call*, the U.S. faces a number of challenges in driving economic growth and productivity. Lagging infrastructure investment hampers national commerce, while inefficient intellectual property protections send new products and capital overseas. Persistent skills shortages abound, while innovations languish or are scaled to production by competing nations. Flat wages, rising income inequality, growing national debt and an uncompetitive corporate tax code have all combined to create a slow recovery from the Great Recession for American businesses, workers and families.

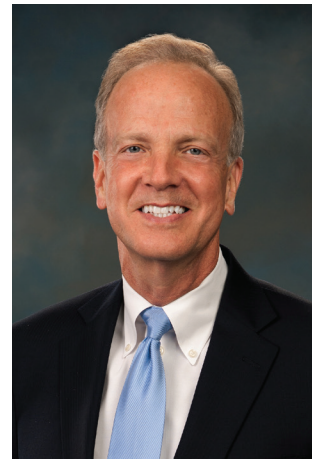
Finding legislative solutions and building momentum around innovative policy ideas is a key strategic engagement for the Council, as it looks to build long-lasting and sustainable relationships with the legislative branch.

The Council, together with Senators Chris Coons (D-DE) and Jerry Moran (R-KS), will launch the Senate Competitiveness Caucus. This group will bring a bipartisan focus to crosscutting legislative and policy priorities critical to U.S. economic competitiveness, while acting as a platform for the Council's voice and policy recommendations.

The Caucus will host a number of meetings and forums throughout the 114th Congress with key private sector leaders from industry, academia and labor identifying pathways to bolster American talent, technology, innovation and infrastructure. Most importantly the Caucus will provide common ground to amplify and raise awareness around the nation's greatest competitive advantage—the innovation and drive of the American worker.



*The Honorable Chris Coons,
United States Senate
(Delaware).*



*The Honorable Jerry Moran,
United States Senate (Kansas).*

In addition to the Competitiveness Caucus, the Council has supported the ongoing National Research Initiative—a bipartisan, bicameral effort to amplify the critical role that federal R&D funding plays in our long-term economic competitiveness. In February, the Council partnered with an NGO-led innovation task force to host a closed-door policy session between public and private leaders and Senators Dick Durbin (D-IL) and Chris Coons, and Representatives Randy Hultgren (R, IL-14) and Derek Kilmer (D, WA-06). Staff from Senator Lamar Alexander's (R-TN) office also participated. This Initiative will convene a number of high-level meetings throughout the 114th Congress to build the case for sustained R&D funding on Capitol Hill.

COMPETE: INNOVATION

Exploring Innovation Frontiers Initiative

A Council on Competitiveness Initiative to Create America's Next Innovation Agenda

The Exploring Innovation Frontiers Initiative (EIFI) is a national effort to understand the over-the-horizon, transformative innovation models that will drive U.S. competitiveness in the coming decades.

Focusing on new innovation models is of critical importance to national prosperity and economic security, as innovation is the primary driver of productivity and, thus, an effective vehicle to increase the U.S. standard of living. This effort comes at a timely moment in national innovation systems research and action. New, transformational models rooted in the democratization and self-organization of innovation are beginning to emerge across the nation. These developments are occurring against the backdrop of increasing global, innovation-based competition and rising internal challenges in the U.S. innovation system, such as changing demographics, lack of diversity, and broad-based inequality of opportunity in the U.S. education system. In response, innovation practitioners and stakeholders are facing difficult questions about how individuals, teams, communities and national institutions of knowledge creation and innovation will transform to support current and future U.S. innovation.

EIFI will collect, synthesize and disseminate broadly the experiential knowledge of active innovation practitioners. This information will be used to provide academicians with direction for future research in innovation, business leaders and strategists with insights to inform future business models, and policymakers with knowledge to enact public policies that create a supportive environment for sustained innovation-driven growth.

The Council—in partnership with our distinctive network of members and affiliates—will host a series of expert dialogues across the United States underpinned by best-in-class intelligence from reports

“The EIFI will craft a transformational, innovation action agenda positioning the United States as the 21st century global innovation leader.”

The Honorable Deborah L. Wince-Smith
President & CEO, Council on Competitiveness

and initiatives making the competitiveness case for strengthening innovation ecosystems. These dialogues will convene a diverse and representative mix of innovation leaders from industry (small, large, entrepreneurial), academia (university presidents, researchers, students), national laboratories and research institutions, labor leaders and key influencers (foundation and media leaders). The goals of the EIFI progressive dialogue series are to:

- Craft with national and regional stakeholders a transformational innovation action agenda that positions the United States as a global innovation leader for decades to come, and
- Catalyze a larger movement to enhance U.S. competitiveness and economic growth by accelerating knowledge creation and the transfer of science and engineering research into market reality.

The Council on
Competitiveness
Exploring
Innovation



Frontiers Initiative is supported by The National Science Foundation and its Directorate of Engineering Office of Emerging Frontiers of Research and Innovation.

The EIFI launch—the first of four dialogues over the coming two years—will take place on June 9th in Atlanta, Georgia at the Georgia Institute of Technology Global Learning Center. The Council; Dr. G.P. “Bud” Peterson, President, the Georgia Institute of Technology; Mr. C. Michael Cassidy, President and CEO, Georgia Research Alliance; and Ms. Hala Modellmog, President and CEO, Metro Atlanta Chamber will host the Atlanta dialogue.

Dr. Kim A. Wilcox, Chancellor, University of California Riverside will host the 2nd EIFI dialogue in Fall 2015—with the 3rd and 4th dialogues to come in 2016.

COMPETE: INNOVATION

Technology Leadership & Strategy Initiative Driving Innovation and Technology Throughout the Ecosystem

An invigorated innovation enterprise creates new jobs and firms, drives economic growth and is essential to solve some of America's greatest challenges in areas as diverse as healthcare, energy and security. The Technology Leadership & Strategy Initiative (TLSI) provides a fertile ground for members to produce and participate in more productive American and global research partnerships, and share methods to preserve and invigorate the nation's technology leadership—a core driver of national productivity over the past half-century.

The Technology Leadership & Strategy initiative continued its work with the 11th chief technology officer (CTO) dialogue in 2014. Convening annually, this elite group of four dozen-plus CTOs from America's premier companies and their peers from top research universities and national laboratories continues to make the business case for overcoming America's innovation deficit; for focusing on strategic, prioritized investments in the research, talent and infrastructure necessary for technology-based innovation across the global economic landscape. Through these dialogues, the TLSI also provides the intellectual underpinnings of many Council initiatives.

The initiative continues under the leadership of co-chairs Dr. Klaus G. Hoehn, Vice President of Advanced Technology and Engineering, Deere & Company and Dr. Mark M. Little, Senior Vice President and Chief Technology Officer, General Electric, and Director, GE Global Research.

In addition, the Council is pleased to welcome Dr. John J. Tracy, Chief Technology Officer and Senior Vice President of Engineering, Operations & Technology, The Boeing Company as the newest TLSI co-chair. John Tracy succeeds Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin, who served as a TLSI founding co-chair since the initiative's inception in 2009. Dr. Johnson will continue to stay involved in the TLSI as an emeritus chair, and the Council is grateful for his leadership and dedication over the past six years.

“The power of technology has never been more obvious. As an example, at GE, we are focused on the industrial internet and the brilliant factory, which will bring new levels of productivity and clarity of purpose to workers around the world.”

Dr. Mark M. Little

Senior Vice President and Chief Technology Officer
General Electric, and
Director, GE Global Research

2014 in Review

2014 was a year of growth for the TLSI, with nearly a dozen new leaders from the private sector and academia joining its ranks. **TLSI Dialogue 11, “Cultivate: Technology Priorities for the Future,”** was held on November 4, 2014 in Washington, D.C. This conversation centered on the continuous need to push the boundaries in technology and innovation while operating in a resource-constrained environment. Given the growing innovation deficit—budget cuts and sequestration adversely impacting research and development funding in the United States, while innovation capacity and technologi-

“The federal de-investment in basic research, creating the innovation deficit, concerns all of us at the Council on Competitiveness. The investment in basic research is the seed corn that grows into a bounty—and enables a prosperous future.”

The Honorable Deborah L. Wince-Smith
President & CEO, Council on Competitiveness



The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Dr. Mark M. Little, Senior Vice President and Chief Technology Officer, General Electric, and Director, GE Global Research; and Dr. Klaus G. Hoehn, Vice President, Advanced Technology and Engineering, Deere & Company.

cal sophistication grows and diffuses around the globe—CTOs must work even harder to ensure leadership in the marketplace.

The Dialogue featured discussions around innovative and breakthrough technologies, including crowd-sourcing and crowd-funding; pervasive sensors; advanced manufacturing technologies such as additive manufacturing; and digital technologies such as cyber-enabled manufacturing and big-data analytics. Additionally, Dr. Cheryl Martin, Acting Director of Advanced Research Projects-Energy joined the conversation.

The Dialogue concluded with a discussion around a groundbreaking set of interviews—undertaken by the Council and Deloitte Consulting—of CTOs from U.S. companies, national laboratories and universities. By asking CTOs to prioritize the most promising, attractive and/or impactful technologies under development in the U.S. national laboratories and university research system, the Council and Deloitte Consulting look to understand better

the alignment between public and private sector research and define the gaps that leave great ideas or technologies languishing in a research laboratory rather than entering the marketplace. From these interviews, the Council and Deloitte will develop a report of technology-focused recommendations for Congress and the administration with a long-term strategy—as well as a set of short-term priorities—to battle shrinking funds for research and development, and ensure the attraction of investments, growth in innovation capacity and the creation of high-value jobs.

2015 Outlook

The TLSI will continue into 2015 with two dialogues—Dialogue 12 on June 9th and Dialogue 13 on November 18th, broadening the conversation by discussing best practices in working and collaborating internationally while continuing to develop specialized expertise here in America.

“The conversation around innovation has developed from the 1990s, when the concept was introduced in relation to technology, to 2000-2005 when innovation in each organization became an important part of the conversation, to 2005-2010 when innovation was linked increasingly to deployment and scaling.

Innovation is an important conversation both in our company and across the ecosystem, and connecting innovation to our thoughts and our daily work so we can scale its effects and enhance its impact is why the Council’s TLSI dialogues are so important.”

Dr. Klaus G. Hoehn

Vice President, Advanced Technology and Engineering,
Deere & Company



Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin; and the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.



Dr. Spiros Dimolitsas, Senior Vice President for Research and Chief Technology Officer, Georgetown University; and Dr. Klaus G. Hoehn, Vice President, Advanced Technology and Engineering, Deere & Company.



Top: Meeting of the Technology Leadership & Strategy Initiative Members, November 4, 2014, Washington, D.C.

Left: Dr. Ajay Malshe, Founder, Executive Vice President and Chief Technology Officer, NanoMech, Inc.; Dr. Spiros Dimolitsas, Senior Vice President for Research and Chief Technology Officer, Georgetown University; and Mr. Chad Evans, Executive Vice President, Council on Competitiveness.



“At ARPA-E, we focus on bridging. Are our funded projects translating science into technology?”

As CTOs know, ideas to products that make an impact on the world is a low-yield process. At ARPA-E, we work to improve this process.”

Dr. Cheryl Martin

Deputy Director for the Advanced Research Projects Agency–Energy (ARPA-E), U.S. Department of Energy



Top left: Dr. Cheryl Martin, Deputy Director for the Advanced Research Projects Agency–Energy (ARPA-E), U.S. Department of Energy; Mr. Craig A. Giffi, Vice Chairman, Automotive and Industrial Products, Deloitte; Mr. Andrew Garman, Founder and Managing Partner, New Venture Partners, LLC; and Dr. Klaus G. Hoehn, Vice President, Advanced Technology and Engineering, Deere & Company.

Top right: Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin; and Dr. Stephen Hsu, Vice President for Research and Graduate Studies, Michigan State University.

Center: Ms. Dona L. Crawford, Associate Director, Computation, Lawrence Livermore National Laboratory.



Top: Dr. Ajay Malshe, Founder, Executive Vice President and Chief Technology Officer, NanoMech, Inc.; and Dr. Mark M. Little Senior Vice President and Chief Technology Officer, General Electric, and Director, GE Global Research.

Center: Dr. Taylor Eighmy, Vice Chancellor for Research & Engagement, University of Tennessee; Ms. Christine Tovee, Chief Technology Officer, EADS North America, Inc.

“Because of the increasing rate of change of technology, because of some of the enabling technologies that are impacting business in different ways—not just in product technology, but manufacturing technology, the whole lifecycle of products, the materials revolution—we experience disruption in the marketplace. This increases the importance and role of the CTO.”

Mr. Chad Evans

Executive Vice President, Council on Competitiveness

COMPETE: INNOVATION

High Performance Computing

The High Performance Computing Advisory Committee (HPCAC) works to increase national competitiveness through the transformational use of advanced computing. Three prominent American leaders in computing from the national laboratories, industry and academia co-chair the HPCAC: Dona Crawford, Associate Director for Computation, Lawrence Livermore National Laboratory; J. Michael McQuade, Senior Vice President of Science and Technology, United Technologies Corporation; and, Steven Koonin, Director of the Center for Urban Science and Progress and Professor of Information, Operations & Management Sciences, Leonard N. Stern School of Business, New York University.

The HPCAC convenes nearly 25 national leaders to address strategic issues that enable Americans to leverage advanced computing more effectively for competitiveness. High performance computing leadership is essential for industrial innovation, national security and pushing the frontiers of knowledge in almost every scientific discipline.

2014 in Review

On April 22, the HPCAC met in Washington, D.C. Participants launched working groups on skills, software and industrial access to advanced computing systems. Patricia Falcone briefed members on the White House's goals for HPC as a strategic national asset. Falcone was the Associate Director for National Security and International Affairs with the President's Office of Science and Technology Policy. She is now the Deputy Director for Science and Technology at the Lawrence Livermore National Laboratory. The meeting also featured an update on legislative issues, a new communications strategy and a summary of a survey contracted by the Council for Intersect360 Research to interview 100 companies on how they benefit from government investment in the leading edge of supercomputing.

Over the next several months, the HPCAC working groups met and hosted calls to guide their work. The skills group identified approximately 30 leading programs, several key reports and began analyzing core elements. The access group identified over 50 of the most advanced government-owned or operated HPC systems and analyzed the programs and policies that govern industrial access to those systems. The software group hosted three roundtables to explore issues that hinder the development and adoption of usable and affordable software for end-users of HPC platforms. The roundtables were held on: August 25, hosted by the Council; September 12, hosted by Argonne National Laboratory; and, September 30, hosted by the Lawrence Berkeley National Laboratory.

The Council released on October 2 the report *Solve. The Exascale Effect: the Benefits of Supercomputing Investment for U.S. Industry*. Key findings from *Solve* include that:

1. More than a third of U.S. industry HPC users claim that their most demanding HPC applications could utilize 1,000-fold increases in computing capability over the next five years;
2. Software scalability is the #1 most significant limiting factor to achieve the next 10-fold improvement in performance, and it is the #2 most significant limiting factor to reach a 1,000-fold improvement;
3. Industry HPC users recognize that government investment in leading-edge HPC benefits their companies and industries. Respondents indicated overwhelmingly that HPC is a matter of competitive survival. Companies also support strengthening cooperation between government and industry.

The HPCAC convened again on November 6 in Washington, D.C. in the offices of K&L Gates. The Honorable Bart J. Gordon, the former Chairman of the House Science and Technology Commit-



Top: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; the Honorable Steven E. Koonin, Director, Center for Urban Science and Progress, and Professor of Information, Operations & Management Sciences, Leonard N. Stern School of Business, New York University; Ms. Dona L. Crawford, Associate Director, Computation, Lawrence Livermore National Laboratory; and the Honorable Bart J. Gordon, Partner, K&L Gates, LLP, and Distinguished Fellow, Council on Competitiveness.

Bottom left: Dr. Mohamad El-Zein, Manager of Metals and Mechanics, John Deere Moline Technology Innovation Center, Deere & Company.

Bottom right: Dr. Gary Mastin, Lockheed Martin Fellow, Chief Scientist, Mission Development, Corporate Engineering & Technology, Lockheed Martin; and Dr. Thuc Hoang, Program Manager, Office of Advanced Simulation and Computing, National Nuclear Security Administration, U.S. Department of Energy.



Top: Ms. Dona L. Crawford, Associate Director, Computation, Lawrence Livermore National Laboratory.

Center: Dr. Spiros Dimolitsas, Senior Vice President for Research and Chief Technology Officer, Georgetown University; and Ms. Alice Popescu-Gatlan, Director, John Deere Technology Innovation Center, Deere & Company; and Dr. David A. Bader, Professor and Chair of the School, Computational Science and Engineering, College of Computing, Georgia Institute of Technology

Bottom: Dr. Dawn Manley, Senior Manager for Chemical Sciences, Combustion Research Facility, Sandia National Laboratories.

Top: Ms. Dona L. Crawford, Associate Director, Computation, Lawrence Livermore National Laboratory; and Dr. J. Michael McQuade, Senior Vice President, Science and Technology, United Technologies Corporation co-chair the April 22, 2014 High Performance Computing Advisory Committee Meeting in Washington, D.C.

Center: The Honorable Patricia K. Falcone, Former Associate Director for National Security and International Affairs, Office of Science and Technology Policy, Executive Office of the President.

Bottom: Dr. Cynthia McIntyre, Senior Vice President, Council on Competitiveness; Dr. Frederick Streit, Director, High Performance Computing Innovation Center, Lawrence Livermore National Laboratory; Dr. Walter L. Kirchner, Institutional Liaison Manager, Argonne National Laboratory; and Ms. Suzy Tichenor, Director, Industrial Partnerships Program, Oak Ridge National Laboratory.

tee, a Distinguished Fellow with the Council and a Partner at K&L Gates hosted the meeting. The working groups presented their findings and next steps, building toward a Council report and action plan in 2015. McQuade briefed participants on the activities of the Secretary of Energy Advisory Board (SEAB), on which he serves. McQuade also serves on the SEAB Task Force on Next Generation High Performance Computing that issued a report August 18, 2014.

HPCAC members also discussed on November 6 the appropriations levels in Congress for HPC and exascale computing and the findings of the *Solve*.



Top: Mr. Ronald Hawkins, Director of Industry Relations, San Diego Supercomputer Center, University of California, San Diego; Mr. Merle Giles, Director, Private Sector & Economic Development, National Center for Supercomputing Applications, University of Illinois at Urbana-Champaign; Mr. Chris Mustain, Vice President, Council on Competitiveness; and Mr. Thomas Lange, Former Director, Corporate R&D Modeling and Simulation, The Procter & Gamble Company.

Bottom: Mr. Richard Arthur, Director, Advanced Computing, Computational Sciences & Architectures, GE Global Research; and Dr. Michael Norman, Director, San Diego Supercomputing Center, University of California, San Diego.

At the November Supercomputing 2014 Conference in New Orleans, the Council reviewed its HPC initiatives and presented the findings of *Solve* to kick off a week long program to showcase how various industries utilize HPC for competitiveness.

2015 Outlook

In 2015, the HPCAC will issue the findings and recommendations of its working groups in a major report on the emerging exascale economy. Full HPCAC meetings will occur April 20 and October 26 and the Council plans to present its report at the Supercomputing 2015 Conference and through other means.

The HPCAC will continue to brief members on policy and technology developments and to welcome national HPC leaders from the public and private sectors to share their views with the Committee. Members also will remain updated on the Council's work under the Department of Energy Extreme Computing and U.S. Competitiveness Grant, and efforts to broaden public awareness.

The Council also will continue to integrate the work of the HPCAC into its other initiatives, highlighting the role of HPC in U.S. technology leadership, innovation, engineering and manufacturing.



Dr. J. Michael McQuade, Senior Vice President, Science and Technology, United Technologies Corporation; Ms. Dona L. Crawford, Associate Director, Computation, Lawrence Livermore National Laboratory; Mr. Chris Mustain, Vice President, Council on Competitiveness; Mr. William C. Bates, Executive Vice President and Chief of Staff, Council on Competitiveness; and Dr. Cynthia McIntyre, Senior Vice President, Council on Competitiveness.

COMPETE: INNOVATION

National Engineering Forum

The competitiveness of the United States requires a workforce of engineers and innovators equipped to design and scale solutions to the nation's most critical needs. But the value-creating engine of American engineering is sputtering. At a time in history when national scientific and technological excellence is more important than ever, the United States must overcome the core challenges facing its engineering enterprise—capacity, capability and competitiveness—to fuel the economy, and ensure prosperity and security.

In 2012, Lockheed Martin launched the National Engineering Forum (NEF), and in partnership with the Council on Competitiveness, NEF aims to:

1. Find solutions to the engineering challenges of capacity, capability and competitiveness—the 3Cs—in alignment with the National Academy of Engineering's Grand Challenges for Engineering.
2. Identify actions the U.S. engineering community can take to ensure our nation's continued security and prosperity.
3. Raise awareness of the role of engineers in Americans' daily lives and chart the future of engineering in the United States.

To achieve these goals, NEF is holding regional dialogues across the country and building on their momentum. In 2014, the National Engineering Forum also expanded the NEF platform to amplify the voice of engineering students and young professionals—the NEF Generation (NEFGen).



www.nationalengineeringforum.com

@NatlEngForum 

The NEF 3 C's

Capacity of our technical talent to fill current and future jobs

Capability of our engineering workforce to address 21st century challenges

Competitiveness of America on the world stage

2014 in Review

Leveraging strategic engineering partnerships, including the network of Council on Competitiveness members and affiliates, the National Engineering Forum engaged five U.S. engineering communities via its 2014 regional dialogue series:

- Raleigh-Durham
- Pittsburgh
- Boston
- Chicago
- Atlanta

Since 2012, more than 1,100 executive-level leaders from industry, academia, national labs, federal, state and local government, non-profits and engineering societies have attended 15 NEF dialogues. For a full synopsis from each dialogue, please visit the NEF website:

www.nationalengineeringforum.com.



NEF Chicago Regional Dialogue—Museum of Science of Industry, U-505 Exhibit.

NEFGen

In parallel with the 2014 NEF regional dialogues, NEF launched NEF Generation (NEFGen) as a place for engineering students and early-career professional engineers to get involved in the NEF movement. This community is the future of engineering, and they are eager and energized to address the 3C's. NEFGen meet-ups are being held in select locations, and participants interact through social media, including Instagram and Twitter.



NEFGen

@NEFGeneration 

2014 NEF engagement

- Twitter followers more than doubled @NatlEngForum
- NEF Instagram @nefgeneration and #IAmAnEngineer campaign launched
- Newsletter subscribers increased 65 percent
- NEF received media coverage across industry publications and popular news platforms such as BuzzFeed

The NEF released its first report, *Engineering our Nation's Future*, summarizing the inaugural year of NEF regional dialogues and identifying more than 30 actionable recommendations across five distinctive themes:

- Understanding the nature of the 3C's
- Education advocacy
- Public perception of engineers and engineering
- Public and private investment
- Immigration reform

To download the full report, please visit the NEF website at www.nationalengineeringforum.com.

2015 and Beyond

The executive-level regional dialogues and NEF-Gen meetups have been robust, thoughtful and focused on solutions. But the dialogues and conversations are just the beginning. Momentum builds from each regional event, and NEF stakeholders are energized and engaged. The conversation continues in 2015 at regional dialogues and NEFGen meetups in Columbus, Ohio; Phoenix, Arizona; Madison, Wisconsin; Orlando, Florida; Golden, Colorado; Clemson, South Carolina; Stillwater, Oklahoma and more locations, to be announced soon.



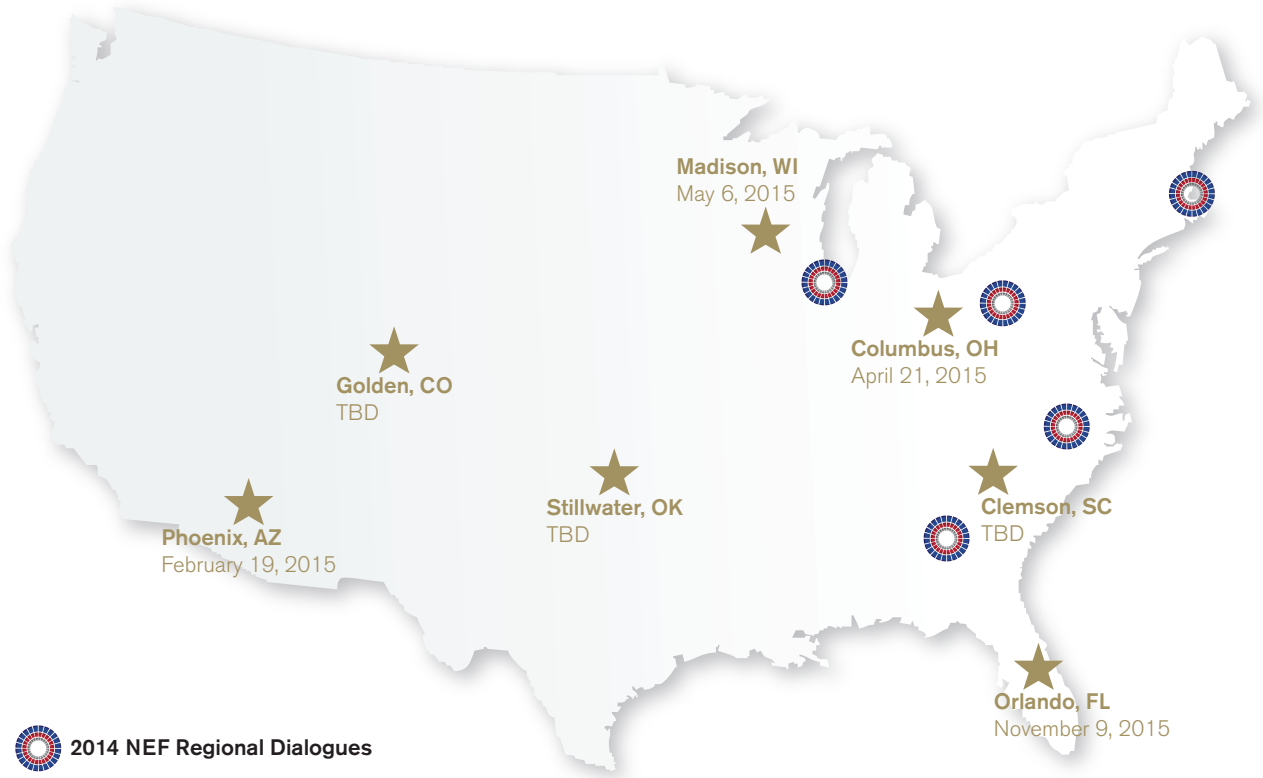
Center: Dr. Louis Martin Vega, Dean of Engineering, North Carolina State University; Mr. James E. Rogers, Chairman of the Board, Duke Energy; and Dr. W. Randolph Woodson, Chancellor, North Carolina State University.

Bottom: Dr. Gerald D. Holder, Dean of Engineering, University of Pittsburgh, addressing participants of the NEF Pittsburgh Regional Dialogue.

Top: The Honorable Steven Koch, Deputy Mayor, The City of Chicago; Mr. Jeffrey J. Wilcox, Vice President of Engineering, Lockheed Martin; Dr. Robert A. Easter, Former President, University of Illinois; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.

Center: Dr. Tom Katsouleas, Dean, Pratt School of Engineering, Duke University; and Dr. Louis Martin Vega, Dean of Engineering, North Carolina State University.

The NEF Dialogue Movement



Dr. Rafael L. Bras, Provost and Vice President for Academic Affairs, Georgia Institute of Technology; Ms. Meagan Campion, External Engineering Advocacy, Lockheed Martin; Mr. Chad Evans, Executive Vice President, Council on Competitiveness; Mr. Tom Noonan, General Manager EnergyWise Solutions, and Partner, TechOperators Investment Capital; Mr. C. Michael Cassidy, President & CEO, Georgia Research Alliance; Dr. G. P. "Bud" Peterson, President, Georgia Institute of Technology; and Dr. Gary May, Dean of Engineering, Georgia Institute of Technology.

“It’s time to elevate to national consciousness engineering’s power to solve our greatest challenges.”

The Honorable Deborah L. Wince-Smith
President & CEO, Council on Competitiveness



Center: Ms. Meagan Campion, External Engineering Advocacy, Lockheed Martin; and Ms. Danielle “Dani” Couger, Corporate Engineering, Technology & Operations, Lockheed Martin, with NEF Generation Students.

Bottom: NEF Atlanta—Student Scribes.

Top: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.

Center: Dr. Richard Miller, President, Olin College of Engineering; and the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.



Top: Mr. Jeffrey J. Wilcox, Vice President of Engineering, Lockheed Martin.

Center: The Honorable Steven Koch, Deputy Mayor, The City of Chicago.

Bottom: Dr. Gary May, Dean of Engineering, Georgia Institute of Technology; and Ms. Abigail Kuchan, Next Team Engineer, Lockheed Martin.

“Engineering is practiced by anyone involved in taking an idea and making it manifest. The National Engineering Forum brings together leaders from a cross-section of disciplines focused on addressing the challenges of capacity, capability and competitiveness in the engineering community.”

Mr. Jeffrey J. Wilcox

Vice President of Engineering, Lockheed Martin

The Council's Collaborative New Space

Thank you for helping to make the Council's new office a true cauldron of creativity and innovation!

Mohawk Industries Inc

Steelcase, Inc.

HBF, LLC

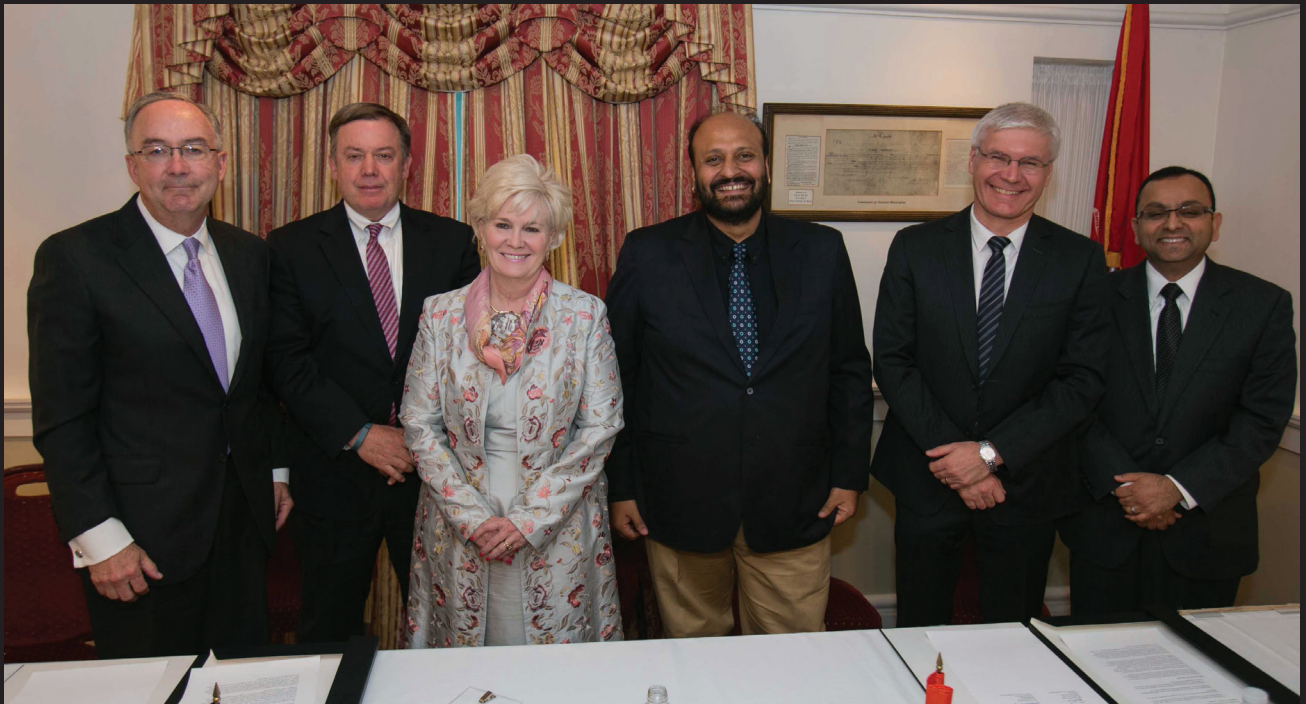
Whirlpool Corporation

Kenyon & Kenyon LLP





Network of Leaders



Top: Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Dr. Amit Kapoor, President and CEO, India Council on Competitiveness; Mr. Wilfried Aulbur, Managing Partner and CEO, Roland Berger-India; and Mr. Sanjeev Kaushal, Vice President, Corporate Technology and Business Development, Tokyo Electron Ltd.

Bottom left: Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness.

Bottom: Mr. James M. Phillips, Chairman and CEO, NanoMech, Inc.; the Honorable Alexander "Andy" A. Karsner, CEO, Manifest Energy, and Distinguished Fellow, Council on Competitiveness; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Ms. Allison Newman, Associate Vice President, External Relations & Administration, Rensselaer Polytechnic Institute; and Mr. William Bohnett, President, Whitecap Investments LLC.



Top: The Honorable Richard J. Durbin, U.S. Senate (Illinois).

Center: Mr. Chad Evans, Executive Vice President, Council on Competitiveness; and Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness.

Bottom: Mr. Paul A. Yarossi, President, HNTB Holdings Ltd; Mr. Nicholas Pinchuk, Chairman & CEO, Snap-on Incorporated; and the Honorable Alexander "Andy" A. Karsner, CEO, Manifest Energy, and Distinguished Fellow, Council on Competitiveness.

Center: Mr. Chad Evans, Executive Vice President, Council on Competitiveness; Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness; Mr. Larry Weber, Chairman and Chief Executive Officer, W2 Group, Inc.; and Mr. Paul A. Yarossi, President, HNTB Holdings Ltd.

Bottom: Meeting of the Council on Competitiveness Executive Committee on April 10, 2014.



Top: Mr. William C. Bates, Executive Vice President and Chief of Staff, Council on Competitiveness; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; and the Honorable Bart J. Gordon, Partner, K&L Gates, LLP, and Distinguished Fellow, Council on Competitiveness.

Center: The Honorable Bart J. Gordon, Partner, K&L Gates, LLP, and Distinguished Fellow, Council on Competitiveness

Bottom: Dr. Roberto dos Reis Alvarez, Executive Director, The Global Federation of Competitiveness Councils presenting the Competitiveness Decoder™ at the Council's Executive Committee Meeting on April 10, 2014.

Top: Dr. Pradeep K. Khosla, Chancellor, University of California, San Diego; Dr. Lou Anna K. Simon, President, Michigan State University; and The Honorable Erich Bloch, Director, Huron Consulting Group, and Distinguished Fellow, Council on Competitiveness.

Center: Dr. Kenan E. Sahin, Founder and CEO, TIAX LLC.

Bottom: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; the Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy; and H.R.H. Prince Saud bin Khalid Al Faisal, Deputy Governor, Saudi Arabian General Investment Authority (SAGIA), and President, National Competitiveness Center.



Top: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Mr. William Bohnett, President, Whitecap Investments LLC; the Honorable France A. Córdova, Director, National Science Foundation; H.R.H. Prince Saud bin Khalid Al Faisal, Deputy Governor, Saudi Arabian General Investment Authority (SAGIA), and President, National Competitiveness Center; Mr. Paul A. Yarossi, President, HNTB Holdings Ltd; and Dr. Luis M. Proenza, President Emeritus, The University of Akron, and Distinguished Fellow, Council on Competitiveness.

Bottom: Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness; and Mr. Terrence Urbaneck, International Representative, United Association of Plumbers and Pipefitters.

Bottom: Mr. Chad Evans, Executive Vice President, Council on Competitiveness, presenting the Competitiveness Decoder™ at the Council's Executive Committee Meeting on April 10, 2014.

COMPETE: ENERGY AND MANUFACTURING

Council Advances Leading Energy and Manufacturing Agenda

For more than a decade, the Council on Competitiveness has defined America's innovation, energy and manufacturing agenda—from its path-breaking National Innovation Initiative and Energy Security, Innovation and Sustainability Initiative, to the U.S. Manufacturing Competitiveness Initiative and American Energy and Manufacturing Competitiveness Partnership. Together, these efforts have contributed significantly to shaping the action plans of two administrations, Congress and State Houses around the country.

2014 in Review

The Council remains at the cutting edge of leadership of public-private efforts to optimize the U.S. energy portfolio and strengthen America's manufacturing capacity to drive long-term productivity and prosperity.

The Energy and Manufacturing Competitiveness Partnership (EMCP)

The Energy and Manufacturing Competitiveness Partnership (EMCP) is a three-year collaboration among national leaders from all sectors of the economy committed to deepening our understanding of the complexities of the energy and manufacturing nexus, and building a roadmap to ensure that America captures the competitiveness opportunity of this new frontier. The EMCP is the vanguard of the movement to dream, discover and deliver the economy of tomorrow, built upon the virtuous cycle of energy for manufacturing and manufacturing for energy.

The EMCP is led by: Industry Co-Chairs Jeff M. Fettig, President and CEO, Whirlpool Corporation and Mayo A. Shattuck III, Executive Chairman, Exelon Corporation; University Co-Chair William C. Powers, Jr., President, University of Texas at Austin; and, Laboratory Co-Chair Dr. William H. Goldstein, Director, Lawrence Livermore National Laboratory. Activities to date include:

- **EMCP Steering Committee dinner**
Held in Washington, D.C. on September 17, 2014, the EMCP Steering Committee dinner convened 40 leaders from industry, academia, labor, national laboratories and government to discuss competitiveness barriers and opportunities at the nexus of energy and manufacturing;
- **Inaugural EMCP Steering Committee meeting**
Hosted by Mr. William Powers, President, University of Texas at Austin on March 3, 2015, the Council convened the inaugural EMCP Steering Committee Meeting to discuss and validate the proposed activities of the EMCP initiative and present the four pillars—talent, technology, investment and infrastructure—that will be used to further examine specific sectors of the economy.

The American Energy & Manufacturing Competitiveness (AEMC) Partnership

The American Energy & Manufacturing Competitiveness (AEMC) Partnership with the U.S. Department of Energy brings together a cross-section of national leaders to address the rapidly shifting national and global energy landscape and uncover actions that can be taken to enable America to take advantage of this distinctive time in its energy history and to bolster dramatically its energy, economic and manufacturing competitiveness over the next 20 years and beyond.



March 3, 2015, Energy and Manufacturing Competitiveness Partnership Steering Committee Meeting Participants at University of Texas at Austin, hosted by Dr. William C. Powers, Jr., President, University of Texas at Austin

This Partnership has grown from its first phase of the AEMC Partnership, where the Council and the Department of Energy Office of Energy Efficiency & Renewable Energy (EERE) created an extensive and first-of-its kind literature review of past and current research efforts across the United States and internationally, ***The Power of Partnerships***, documenting the world's most impactful energy and manufacturing policies. The second phase of the AEMC Partnership launched in 2013 with the inaugural AEMC Summit and four supporting, progressive dialogues across the country. These activities continued in 2014 with:

- **2014 AEMC Summit:** held in Washington, D.C. on September 17, 2014, the Summit convened over 800 leaders from industry, academia, labor, national laboratories, and government to discuss the most critical energy and manufacturing challenges and opportunities affecting U.S. prosperity, sustainability, and security; accelerate a movement to increase U.S. competitiveness in the production of clean energy products and to increase U.S. manufacturing competitiveness across the board through greater energy productivity; and, to commit to concrete actions to spark continued innovation and industrial transformation needed for economic growth and job creation.

- **2014 AEMC Partnership Dialogue series:** the Council continued the AEMC Partnership dialogue series from 2013 with the fifth dialogue, presenting a case-study of a public-private partnership concept that EERE and/or the Council's membership could carry out to increase the competitive production of clean energy, energy efficiency and advanced manufacturing products in the United States; or, increase manufacturing competitiveness through increased energy productivity measures.

This Dialogue was hosted by Nicholas Dirks, Chancellor, University of California, Berkeley and held in Berkeley, CA on April 14.

Accelerate Energy Productivity 2030

Productivity, and the prosperity it enables, is the cornerstone of our national competitiveness. Emerging from a global economic recession and developing newfound domestic energy resources, we have a momentous opportunity to grow our economy through new technologies, processes, and organizational structures that capture gains in energy productivity—in essence, boosting the long-term, overall productivity potential for America.



“Taking action today to increase our energy productivity, by boosting the competitiveness of American manufacturers and building clean energy technologies here in the United States, will help grow our economy for generations to come.”

The Honorable Ernest J. Moniz

Secretary, U.S. Department of Energy
 Launching the Accelerate Energy
 Productivity 2030 initiative



Increasing energy productivity not only has the potential for large cost-savings for households and businesses, it offers an effective route to reduce environmental impact from energy consumption and lessens overall dependence on foreign energy sources. To this end, President Obama announced in March of 2013 his intent to lay a policy foundation that will support public and private sector efforts to double national energy productivity from 2010 levels by the year 2030.

This ambitious but achievable goal cuts across all economic sectors and represents a rising tide that will lift both U.S. industry and families, while providing enormous environmental benefits.

To achieve this vision, the Council on Competitiveness has partnered with the Secretary of Energy, the Honorable Ernest Moniz, and the Alliance to Save Energy to build a policy framework informed by a broad range of public and private sector stakeholders.

On November 6th, 2014, the Council, Secretary Moniz and ASE convened a group of private sector leaders to lay out an agenda creating a policy roadmap to achieve the President’s goal.



Top: Dr. Nicholas Dirks, Chancellor, University of California, Berkeley; the Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy; and Dr. Jon Schaeffer, Senior Engineering Manager, GE Power & Water.

Center: Dr. Peter Littlewood, Director, Argonne National Laboratory; and Mr. Rodney Heiple, Director of Business Technology, Alcoa, Inc.

Bottom: Mr. Mayo Shattuck, III, Executive Chairman, Exelon Corporation; and the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.



Top: Dr. Steven F. Ashby, Director, Pacific Northwest National Laboratory; the Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy; Dr. Alfred P. Sattelberger, Deputy Laboratory Director for Programs, Argonne National Laboratory; and Mr. Mario Longhi, President and CEO, United States Steel Corporation.

Bottom: Mr. Mario Longhi, President and CEO, United States Steel Corporation; and Mr. Dan DiMicco, Executive Chairman, Nucor Corporation.

Top: Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; Mr. David Szczupak, Executive Vice President, Global Product Organization, Whirlpool Corporation; and Dr. Michael M. Crow, President, Arizona State University, and University Vice Chairman, Council on Competitiveness.

Bottom: Dr. William C. Powers, Jr., President, University of Texas at Austin; and Dr. William H. Goldstein, Director, Lawrence Livermore National Laboratory.

Launching Accelerate Energy Productivity 2030, the Council, Secretary Moniz and ASE, together with this group of key industry stakeholders, identified three key economic pillars critical to achieving transformational gains in energy productivity—buildings and transportation; power generation and distribution; and industrial processes and systems.

Beginning in 2015, the Accelerate Energy Productivity 2030 partnership kicked off a series of cross-country dialogues, focusing on these three broad economic sectors, teaming with regional leaders in energy productivity.

The first dialogue—held at North Carolina State University and hosted by Chancellor Randy Woodson on February 4, 2015—featured a number of public and private stakeholders from the transportation and building sector. Dr. Jonathan Pershing, Principal Deputy Director of the Office of Energy Policy and Systems Analysis, led a conversation around how to build a policy environment that enables the development and deployment of energy productive technologies, while also addressing challenges to improving energy use in the short-term.



Top: *The Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy; and Ms. Elizabeth Wayman, Director, Clean Energy Manufacturing Initiative, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy.*

Bottom: *Mr. Steven Betza, Director, Hardware Engineering & Advanced Manufacturing, Lockheed Martin; and Dr. Mark Johnson, Director, Advanced Manufacturing Office, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy.*

Following the successful dialogue at NC State, the partnership travelled to Redmond, WA on April 13th for a high-level roundtable dialogue hosted by Amy Ericson, U.S. Country President, Alstom Inc., and Steven Ashby, Director, Pacific Northwest National Laboratory. This dialogue focused on the opportunities and challenges around “smart” power generation and deployment.

2015 Outlook

The Energy and Manufacturing Competitiveness Partnership

America’s energy landscape—and its impact on U.S. manufacturing—is undergoing a dramatic transformation, redrawing global geopolitical relationships, re-calibrating business and manufacturing decision making and recharging the industrial batteries of American communities. In addition, the United States holds aces in its research, innovation and venture capital assets. Wise policies and practices—designed and enacted now—could unleash the power of these advantages to elevate U.S. productivity and prosperity for the coming decades.

The country is poised to leverage these assets and capture a new wave of manufacturing here in the United States. Convening leaders from across business, academia, labor, the national laboratories, and government, the Council in 2015 launched a broad conversation around the barriers and opportunities to increasing U.S. competitiveness at the nexus of energy and manufacturing.

The Council will hold both Steering Committee meetings and Advisory Committee meetings in 2015. By convening these committees of C-suite leaders from across all sectors of the economy, the Energy and Manufacturing Competitiveness Partnership will lay the groundwork for a multi-year partnership that will include:

2016 Call to Action

The Council will co-create with EMCP members a Call-to-Action for the 2016 Congress and the next administration, urging them to set an ambitious agenda and create policies that will foster innovation, competitiveness and prosperity for all Americans.

Sector Studies

The Council will convene dialogues around several sector studies in 2015, setting an ambitious agenda and building a foundation of deep-dive investigations of the competitiveness drivers, challenges, and opportunities within strategic sectors of the U.S. economy. These sectors will be analyzed through the lenses of technology, talent, investment and infrastructure.



The Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy; Mr. John Rogers, Jr., Chief Executive Officer and Co-Founder, Local Motors; and the Staff of the Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy with the LM Strati, the first 3D-printed car, built using direct digital manufacturing.

The American Energy & Manufacturing Competitiveness Partnership

The 2015 AEMC Summit

Building on the success of the Inaugural AEMC Summit in December 2013 and the 2014 AEMC Summit in September 2014, the Council and the Department of Energy will host the third AEMC Summit on September 15 and 16, 2015 in Washington, D.C.

The AEMC Partnership Progressive Dialogue Series

Continuing the progressive dialogue series from 2013 and 2014, a sixth regional AEMC Partnership dialogue will be held in 2015. This dialogue will collect input from industry, academia, and the national laboratories around public-private partnerships that can help unleash the potential in the marketplace for investment and scale-up of technologies and businesses with the potential to increase U.S. competitiveness in the energy and manufacturing sectors.

In addition, three regional dialogues will be held with a special focus on accelerating the design, development, manufacture and deployment of advanced materials. These dialogues will be co-hosted by the Council, the Department of Energy and:

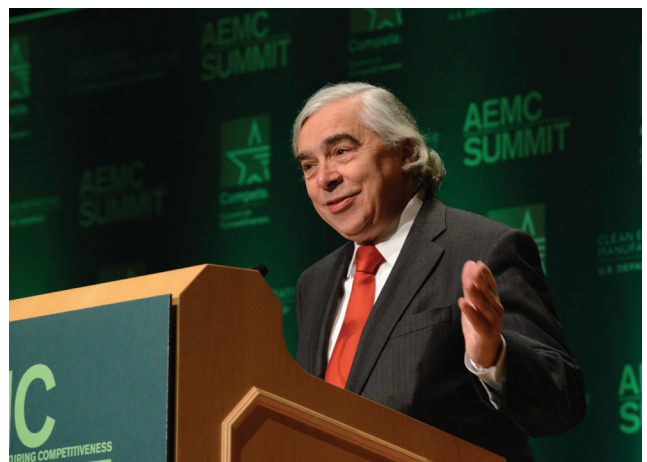
- Oregon State University and the National Energy Technology Laboratory in Portland, Oregon in May 2015;
- Argonne National Laboratory in Chicago, Illinois in June 2015; and
- College Station, Texas in July 2015.

Accelerate Energy Productivity 2030

The *Accelerate Energy Productivity 2030* initiative is set to have an extremely active 2015, with a number of engagements on the books, leading up to the unveiling of the policy roadmap by Secretary Moniz in Washington D.C. at the 3rd American Energy & Manufacturing Competitiveness Summit.

On May 25th-26th, the initiative joins the 6th annual Clean Energy Ministerial in Merida, Mexico, with Council President & CEO Deborah L. Wince-Smith leading a private sector roundtable and engaging with a number of international energy ministers on strategies to drive national and global energy productivity.

And on July 15th, in Minneapolis, 3M leadership will host the partnership's third dialogue, focusing on energy productivity strategies and best practices in industrial processes and systems.



Top: Dr. Ray O. Johnson, Former Senior Vice President and Chief Technology Officer, Lockheed Martin; Dr. Charles F. Kahle, II, Chief Technology Officer, PPG Industries; Dr. Mark M. Little Senior Vice President and Chief Technology Officer, General Electric, and Director, GE Global Research; and Dr. Michael Crow, President Arizona State University, and University Vice Chairman, Council on Competitiveness.

Center: The Honorable Charles J. Fleischmann, U.S. House of Representatives (Tennessee).

Bottom: Mr. Charles O. Holliday, Jr., Former Chairman, Bank of America, and Chairman Emeritus, Council on Competitiveness.

Center: Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness; Mr. Jeff Fettig, Chairman and CEO, Whirlpool Corporation; and the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness.

Bottom: The Honorable Ernest J. Moniz, Secretary, U.S. Department of Energy.



Top: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Ms. Kateri Callahan, President, Alliance to Save Energy; Mr. Martin Durbin, President & CEO, America's Natural Gas Alliance (ANGA); Ms. Amy Ericson, U.S. Country President, Alstom Inc.; Mr. Todd Skare, Chief Technology Officer, Praxair, Inc.; and the Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy.

Center: Dr. Mark Johnson, Director, Advanced Manufacturing Office, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy.

Bottom: Summit Participant experiences the Lockheed Martin Exhibit.

Center: Mr. Jason S. Miller, Deputy Director, National Economic Council, and Special Assistant to the President for Manufacturing Policy, The White House.

Bottom: Mr. Harold L. Sirkin, Senior Partner, The Boston Consulting Group; Dr. Phillip A. Singerman, Associate Director for Innovation & Industry Services, National Institute of Standards and Technology, U.S. Department of Commerce; Ms. Jean Redfield, President and Chief Executive Officer, NextEnergy; Dr. Annette Parker, President, South Central College; Dr. Thomas E. Mason, Laboratory Director, Oak Ridge National Laboratory; and Mr. Leo Gerard, International President, United Steelworkers.



Top: The Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy; Dr. W. Randolph Woodson, Chancellor, North Carolina State University; Dr. Peter Littlewood, Director, Argonne National Laboratory; Dr. Curtis Carlson, Vice Chairman, Innovation, SRI International; and Dr. Michael Kluse, Former Director, Pacific Northwest National Laboratory.

Center: Mr. Christopher A. Smith, Principal Deputy Assistant Secretary for Fossil Energy, U.S. Department of Energy.

Bottom: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; and the Honorable David T. Danielson, Assistant Secretary for Energy Efficiency and Renewable Energy, U.S. Department of Energy.

Center: Mr. Peter Davidson, Executive Director, Loan Programs Office, U.S. Department of Energy; Dr. Paul Hommert, Director, Sandia National Laboratories, and President, Sandia Corporation; Dr. Adam Powell, Chief Technology Officer, INFINIUM; Mr. Javier Saade, Associate Administrator for the Office of Investment and Innovation, U.S. Small Business Administration; Dr. Kenan Sahin, Founder and President, TIAX LLC; and Ms. Lauren Gardner, Staff Writer, CQ-Roll Call.

Bottom: Mr. John Rogers, Jr., Chief Executive Officer and Co-Founder, Local Motors, showcasing the LM Strati.

COMPETE: GLOBAL**U.S.-Brazil Innovation Partnership****2014 In Review**

Following the 3rd US-Brazil Innovation Summit in 2013, the Council and its partners in Brazil focused on building out the US-Brazil Innovation Platform by executing a series of steering committee meetings, launching new projects and beginning preparations for the 4th US-Brazil Innovation Summit, to be hosted October 15-16, 2015 by Council Executive Committee Member and UC San Diego Chancellor, Pradeep Khosla.

US-Brazil Innovation Platform

Following the 2013 Summit, the Council and its Brazilian partners hosted the inaugural Steering Committee meeting of the “U.S.-Brazil Bi-National Innovation Platform”—the vehicle to organize and develop new-to-the-world, scalable, innovation-based joint ventures and projects between the Western Hemisphere’s two largest economies. The current U.S. members of the Bi-National Innovation Platform include:

- Dr. Dan E. Arvizu, Director and Chief Executive, National Renewable Energy Laboratory
- Dr. Michael M. Crow, President, Arizona State University, and University Vice Chair, Council on Competitiveness
- Dr. Spiros Dimolitsas, Senior Vice President for Research and Chief Technology Officer, Georgetown University
- Dr. William H. Goldstein, Director, Lawrence Livermore National Laboratory
- Dr. Klaus G. Hoehn, Vice President, Advanced Technology & Engineering, Deere & Company
- Dr. Pradeep K. Khosla, Chancellor, University of California, San Diego
- Dr. Mark M. Little, Senior Vice President and Chief Technology Officer of GE Global Research, General Electric Company
- Dr. Thomas E. Mason, Laboratory Director, Oak Ridge National Laboratory

- Dr. Michael McQuade, Senior Vice President, Science and Technology, United Technologies Corporation
- Mr. Blake Moret, Senior Vice President, Control Products & Solutions, Rockwell Automation;
- Dr. Pete Worden, Center Director, NASA Ames Research Center

The 2nd Steering Committee meeting of the U.S.-Brazil Innovation Platform took place at Lawrence Livermore National Laboratory, February 17-19, 2014, hosted by LLNL Director, Dr. William Goldstein, and Council President & CEO, Deborah L. Wince-Smith. This meeting of more than two dozen private and public sector leaders—which included on the Brazilian side the Presidents of INMETRO (the National Institute of Metrology, Quality and Technology), CAPES (the Coordination for the Improvement of Higher Education Personnel with the Ministry of Education), CNPQ (the National Council for Scientific and Technological Development within the Ministry of Education); the managing director for BNDES; and the senior leadership team from CNI, the Brazilian National Confederation of Industry—focused squarely on evaluating potential pilots and scalable projects in drug discovery and development, enabling the “Internet of things” and advancing next generation biofuels.

The 3rd Steering Committee meeting of the U.S.-Brazil Innovation Platform took place at the Brazilian Ministry of Development, Industry and Foreign Trade (MDIC), November 10-14, 2014, hosted by then-Minister of MDIC, Mauro Borges Lemos. The Steering Committee reviewed a number of potential new projects emerging from the Platform, including a new-to-the-world comprehensive drug discovery and development initiative leveraging high performance computing and led by the Council, Georgetown University, Oak Ridge National Laboratory, Lawrence Livermore National Laboratory and the Brazilian Agency for Industrial Development (ABDI).



Mr. Chad Evans, Executive Vice President, Council on Competitiveness; Mr. Andrés R. Gluski, President & Chief Executive Officer, AES Corporation; Mr. Steve Long, Vice President & Latin America General Manager, Intel Corporation; and Mr. Elly Keinan, General Manager, North America, IBM at the Foreign Affairs' Brazil Innovation Forum.

2015 Outlook

The 4th Steering Committee meeting is slated for May 14, 2015 in São Paulo—in conjunction with the Brazilian National Confederation of Industry's annual Innovation Forum. In addition to updates on Platform projects, the 4th Platform Steering Committee Meeting will focus attention on two other critical efforts: preparing for engagement in the anticipated, upcoming State Visit of President Dilma Rousseff, and final planning for the 4th US-Brazil Innovation Summit, October 15-16 in San Diego.

The 4th US-Brazil Innovation Summit will focus on a bias for action—moving beyond idea generation to take steps in advancing the design and implementation of projects, initiatives and other co-developed efforts. The first day of work will consist of parallel sessions and workshops, organized to develop specific actions and recommendations by technological and/or thematic areas, which will then underpin the Summit's second day of high-level keynotes and plenary panels.

Key thematic areas anticipated for the 2015 4th US-Brazil Innovation include:

- Optimizing technological innovation in the life sciences (from the basic research underpinning biotech and pharmaceuticals, to medical devices, to the delivery of healthcare technology and solutions).
- Leveraging opportunities across the global energy spectrum (bridging the gap between the use of new fossil fuel sources and the development of renewable energy sources).
- Developing and deploying information and communications technologies to drive innovation across all sectors of society (from advanced manufacturing, to life sciences, etc.).
- Innovating sustainably at the nexus of food, energy and water resources.

COMPETE: GLOBAL

Global Federation of Competitiveness Councils

2014 in Review

The Council on Competitiveness continues to leverage its strong presence in the international community by broadening its understanding of how key U.S. trading partners and markets address challenges to their own competitiveness. Through its role as a founding board member and secretariat of the Global Federation of Competitiveness Councils (GFCC), the Council maintains its clear connection to issues affecting national competitiveness in countries around the world, while deepening connections and forging new partnerships for its members.

The GFCC membership network now includes competitiveness councils in 35 countries around the globe. The GFCC is composed of ten Board Members, thirteen General Members and a network of fourteen other national and regional organizations from countries whose markets are of strategic importance to Council members. Highlights from 2014 included:

- On December 11-13, the GFCC co-hosted the Global Innovation Summit and 2014 Annual Meeting with Ms. Lori Schmidt, Chief Executive Officer, GO Productivity and Mr. Paul Verhesen, Board Chair, GO Productivity and President & CEO, Clark Builders in Banff, Alberta, Canada. These events brought together competitiveness councils from around the globe, c-suite leaders from U.S. and global private sectors, senior government officials from member countries and other stakeholders to discuss competitiveness and regional innovation. The event presented several Council members with unique business networking opportunities with public and private sector representatives from 20 countries.
- On December 11, GO Productivity conducted site visits showcasing innovation and industry in Alberta. On December 13, the GFCC Annual Meeting opened by welcoming GO Productivity to the GFCC Board.
- The 2014 Innovation Summit marked the fourth year the GFCC has published a Best Practices Report and it has quickly become a must-read for competitiveness organizations around the world. This year's report demonstrated the importance of cultivating regional innovation to address global economic, environmental and energy challenges and featured case study contributions from participating GFCC member organizations from Brazil, Canada, Ireland, Korea, Mongolia, the United Arab Emirates, the United Kingdom and the United States.
- The 2014 Global Innovation Summit marked the launch of the beta version of the GFCC **Competitiveness Decoder™**—a first-of-its-kind, web-based tool (<http://decoder.thegfcc.org>) to visualize the drivers of national competitiveness in an age of "Big Data." The Competitiveness Decoder™ is a groundbreaking tool developed from the efforts of the GFCC and its members that allows nations, policymakers, investors and other stakeholders to compare the performance of 100+ nations, over 35 years, across 8 core pillars comprised of 130+ metrics and a comprehensive global trade database. Development of the Competitiveness Decoder™ is an ongoing GFCC endeavor, with improvements and new features to come in 2015.



GFCC Members release the 2015 Competitiveness Principles and Report on Best Practices in Competitiveness Strategy.

2015 Outlook

At the 2014 GFCC Annual Meeting, members set out an ambitious agenda for the next year, which includes specific initiatives and strategic partnerships to advance understanding of the global economy. Over this period, the organization will:

Strengthen Membership

- Finalize membership with organizations within the GFCC Network and identify and recruit members from underrepresented regions around the world.
- Continue to strengthen and diversify the Board of Directors by ensuring all regions are represented.

Build Out and Promote the GFCC Competitiveness Decoder™

- Build upon the tremendous work achieved on the GFCC Competitiveness Decoder™ by seeking input and support from various stakeholders to gain legitimacy for its practical applications in different sectors to enhance the national and sub-national competitiveness debate.
- Catalogue and index the best practices section to align with metrics.
- Continue to enhance the underlying data sets supporting the Competitiveness Decoder™.

- Identify resources to support the ongoing maintenance and evolution of the Competitiveness Decoder™.

Deepen Partnerships

- Collaborate with partnering organizations, including the STS-forum, the World Bank, the Organization of American States, the Inter-American Competitiveness Network and the World Economic Forum.

Co-Host the 2015 Annual Meeting

- Co-host with GFCC founding member, the Saudi Arabian General Investment Authority (SAGIA) and the National Competitiveness Center, the 2015 Global Innovation Summit and GFCC Annual Meeting. The event will be held in Saudi Arabia's King Abdullah Economic City on November 1-2, 2015 under the leadership of the GFCC's 2015 Vice-Chair, H.R.H. Prince Saud bin Khalid Al Faisal, Deputy Governor, SAGIA, and President, National Competitiveness Center; and H.E. Abdullatif A. Al-Othman, Governor of SAGIA, and will focus on infrastructure.

For more information about the GFCC, please visit www.thegfcc.org



Top: Rear Admiral Mark Heinrich (Ret. USN), President and CEO, Associated Aircraft, Manufacturing & Sales, Inc.; and Ms. Catherine Beard, Executive Director, ManufacturingNZ and ExportNZ.

Center: Mr. Chad Evans, Executive Vice President, Council on Competitiveness; Mr. Terrence Urbanek, International Representative, United Association of Plumbers and Pipefitters; Ms. Amy Ericson, U.S. Country President, Alstom Inc.; and Mr. James M. Phillips, Chairman and CEO, NanoMech, Inc.

Bottom: Mr. Dylan Jones, President and CEO, Canada West Foundation; Dr. Amit Kapoor, President & CEO, India Council on Competitiveness; Mr. Jeffrey Finkle, President & CEO, International Economic Development Council; and Mr. Robert Barbour, Director and Chief Executive, Centre for Competitiveness.

Top: Mr. Peter Garrett, President, Innovate Calgary; Mr. Steve Snyder, Former President and CEO, TransAlta Corporation; and Mr. Chris Lumb, CEO, TEC Edmonton.

Center: Mr. Paul Verhesen, Board Chair, GO Productivity, and President & CEO, Clark Builders.

Bottom: Mr. William C. Bates, Executive Vice President, Council on Competitiveness; Mr. Hipólito Matías, Head of Department, Policy Implementation and Funding Strategy, Instituto do Fomento Empresarial; Mr. Mohammad el-Khattabi, Case Handler, Kingdom of Morocco Competition Council; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Mr. Óscar Rodrigues, Administrator, Instituto do Fomento Empresarial; and Ms. Nádia Cruz, Administrator, Instituto do Fomento Empresarial.



Top: Mr. Stephen Lougheed, President and Chief Executive Officer, Alberta Innovates–Technology Futures; H.R.H. Prince Saud bin Khalid Al Faisal, Deputy Governor, Saudi Arabian General Investment Authority (SAGIA), and President, National Competitiveness Center; and Dr. Masaharu Sumikawa, Senior Advisor, Hitachi, Ltd., and Chairman, Working Committee, Council on Competitiveness, Nippon.

Bottom: H.E. Tae-Shin Kwon, President, Korea Economic Research Institute; her Worship Karen Sorensen, Mayor, Town of Banff, AB, Canada; H.R.H. Prince Saud bin Khalid Al Faisal, Deputy Governor, Saudi Arabian General Investment Authority (SAGIA), and President, National Competitiveness Center.

Top: Dr. Thomas Zacharia, Deputy Lab Director for Science and Technology, Oak Ridge National Laboratory, and Former Executive Vice President of Research and Development, Qatar Foundation; and Mr. Justin Riemer, Assistant Deputy Minister, Enterprise Division, Ministry of Innovation and Advanced Education, Government of Alberta, Canada.

Bottom: H.E. Tae-Shin Kwon, President, Korea Economic Research Institute; her Worship Karen Sorensen, Mayor, Town of Banff, AB, Canada; H.R.H. Prince Saud bin Khalid Al Faisal, Deputy Governor, Saudi Arabian General Investment Authority (SAGIA), and President, National Competitiveness Center.



Top: Yellow Ribbon Dancers perform at the Gala Dinner

At right: The Honorable Don Scott, Minister of Innovation & Advanced Education, Government of Alberta.



The America Competes Awards

The Council hosted the America Competes Awards Dinner in New York City at the Plaza Hotel on April 28, 2014.

The honorees were **Mr. James Turley, former Chairman and CEO of Ernst & Young**, who received the honor for corporate leadership and **the Honorable Rudolph Giuliani, former Mayor of New York**, who received the honor for contributions to public service.

The *Corporate Leadership Award* is given to distinguished executives who look beyond the bottom line to ensure their firms are outstanding global citizens working to improve communities, the nation and the world. In selecting Mr. Turley, the Council gave considerable attention to his many achievements and the positive effect they have had upon the United States. At the helm of one of the “100 Best Companies to Work For,” and with a personal approval rating from employees of over 95%, Mr. Turley’s leadership extends beyond promoting entrepreneurship and innovation as core competitiveness drivers to one that truly embraces the idea that people are a company’s most valuable asset.

The *Public Service Award* recognizes leaders who work to create a lasting impact on America’s quality of life through impactful community outreach and engagement. Throughout his career as a public servant and, perhaps most importantly, as a rallying figure in the wake of the 9/11 terrorists attacks, Mayor Giuliani has played an enormous and influential role. His voice of compassion for those in need is matched only by his passion for ensuring America remains safe, secure and a land of opportunity for all its citizens.

Dozens of sponsors, including Lockheed Martin, the Underwriting Sponsor for the 2014 America Competes Award, make the Awards possible. The funds raised through the America Competes Awards are used to support the Council’s overarching mission of



enhancing U.S. productivity and creating opportunity for all by setting an action agenda and engaging policymakers on the drivers of competitiveness.

The generous support provided through the America Competes Awards enables the Council to do the research, engage the experts and bring our members together to develop and implement this agenda.

The next America Competes Awards will be held in New York City in 2016.



The Council on Competitiveness would like to thank the following lead sponsors of the America Competes Awards in New York City

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OPPOSITE PAGE

Top: Mr. Jeffrey J. Wilcox, Vice President of Engineering, Lockheed Martin; the Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; the Honorable Rudy Giuliani, Partner, Bracewell & Giuliani LLP, and Former Mayor, the City of New York; and Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness.

Bottom: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Mr. James Turley, Former Chairman & CEO, EY; Mr. Tom Hough, Americas Vice Chair, Assurance Services, EY; and Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness.

THIS PAGE

Top: Mr. James K. Clifton, Chairman and CEO, Gallup, Inc.; and the Honorable Rudy Giuliani, Partner, Bracewell & Giuliani LLP, and Former Mayor, the City of New York.

Center: The Honorable Deborah L. Wince-Smith, President & CEO, Council on Competitiveness; Dr. Alice P. Gast, President & Rector, Imperial College London; and Dr. Jorge Puente, Former President, Asia-Pacific and Canada, Oncology Business Unit, Pfizer Inc.

Bottom: Mr. Samuel R. Allen, Chairman and CEO, Deere & Company, and Chairman, Council on Competitiveness.

Staff Leadership News

Mr. Michael van Ter Sluis

Vice President



The Council is pleased to announce the promotion of Mr. Michael van Ter Sluis (formerly Michael Bush) to Vice President.

Since joining the Council in 2012, Michael has been an integral part of the Council's policy team. In his new position, Michael leads the Council's innovation policy portfolio, consisting of the CTO-level Technol-

ogy Leadership and Strategy Initiative, the National Engineering Forum, and the Council's newest effort – the Exploring Innovation Frontiers Initiative.

Before coming to the Council, Michael worked as a professional engineer consulting on and designing mission critical and traditional fire suppression systems.

He has a Bachelor of Science in civil engineering from the University of Illinois at Urbana-Champaign, and a Masters degree in International Science and Technology Policy from the George Washington University. He has also studied international economics at Fudan University in Shanghai, China.

Dr. Andrew (Drew) Steigerwald

Senior Policy Director

The Council is pleased to welcome Dr. Andrew (Drew) Steigerwald as its newest Senior Policy Director. Drew works on Council initiatives focused on manufacturing, energy, technology and innovation, in addition to spearheading the Council's congressional outreach.



Prior to joining the Council, Drew served as a science and technology policy advisor at the U.S. Agency for International Development as well as a staff member in the office of Senator Sherrod Brown, where he worked on manufacturing and energy legislation, including the Brown-Blunt Revitalize

American Manufacturing and Innovation (S. 1468) bill to establish and fund a National Network for Manufacturing Innovation (NNMI).

As a National Science Foundation Integrative Graduate Education and Research Traineeship (IGERT) fellow, Drew earned his Ph.D. in interdisciplinary materials science from Vanderbilt University, where he studied ultrafast phonon dynamics in III-V semiconductor nanostructures. After earning his Ph.D., Drew was a postdoctoral researcher in the Norm Tolk Lab at Vanderbilt University, leading SBIR/STTR and grant award efforts in addition to research.

Drew has authored and co-authored 11 peer-reviewed publications and led or supported grant proposals to secure project funding from the Department of Energy, the Office of Naval Research, the Air Force Office of Scientific Research and DARPA.

Drew also has a M.A. in applied physics from Fisk University and a B.E. in engineering physics from the Ohio State University.

Dr. Roberto dos Reis Alvarez

Executive Director, Global Federation of Competitiveness Councils



The Council is pleased to welcome Dr. Roberto dos Reis Alvarez to its staff as Executive Director of the Global Federation of Competitiveness Councils (GFCC), for which the U.S. Council serves as the secretariat.

Roberto—a research scholar at Arizona State University and the co-creator of the GFCC's Competitiveness De-

coder™—comes to the GFCC from the Brazilian Agency for Industrial Development's (ABDI), where he served as the senior manager of the Analysis and Strategic Projects Unit.

During his time at ABDI, Roberto coordinated ABDI's bilateral innovation initiatives with the United States, Sweden and Germany and economic integration initiatives with Latin America and Africa. He co-developed the C-Suite U.S. Brazil Innovation Summits and Innovation Learning Laboratory series, designed to spark business and research partnerships between the Western hemisphere's two largest economies.

Roberto's expertise in international development and innovation will be a valuable addition to the GFCC, particularly as the GFCC enters the next phase of development for the Competitiveness Decoder™ and new initiatives.

Ms. Cândida Oliveira

Senior Advisor to the President, The Brazilian Agency for Industrial Development—ABDI.



The Council is pleased to welcome Ms. Cândida Oliveira to its team under a professional exchange with the Brazilian Agency for Industrial Development (ABDI). Cândida is working in Washington, D.C. to help manage the U.S.-Brazil Innovation Initiative, and is spearheading planning for the 4th U.S.-Brazil Innovation Summit.

With experience in education and sustainable development, Cândida joined ABDI in 2007. After serving as the coordinator for the Board Cabinet, she worked in the Project Management Office for two years and was also responsible for the Institutional Affairs Advisory before being nominated to Chief of Staff in 2012.

Cândida is a political scientist and expert in sustainable development and environmental law, with degrees from the Universidade de Brasília-UnB.

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The Council on Competitiveness is the only group of corporate CEOs, university presidents, labor leaders and national laboratory directors committed to ensuring the future prosperity of all Americans and enhanced U.S. competitiveness in the global economy through the creation of high-value economic activity in the United States.

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HOW WE OPERATE

The key to U.S. prosperity in a global economy is to develop the most innovative workforce, educational system and businesses that will maintain the United States' position as the global economic leader.

The Council achieves its mission by:

- Identifying and understanding emerging challenges to competitiveness
- Generating new policy ideas and concepts to shape the competitiveness debate
- Forging public and private partnerships to drive consensus
- Galvanizing stakeholders to translate policy into action and change

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